

# EHRlichiosis

Ehrlichiosis is an acute, febrile bacterial illness caused by microorganisms called rickettsiae that are transmitted to humans by a tick bite. The symptoms are often non-specific with the most common complaints being fever, headache, myalgia, anorexia, nausea, and vomiting. The illness ranges from mild to life threatening.

Two types are recognized in the United States:

- HME—Human Monocytic Ehrlichiosis—*Ehrlichia chaffeensis*
- HGE—Human Granulocytic Ehrlichiosis—probably *E. phagocytophilia* and *E. equi*

## Laboratory Criteria for Confirmation:

- Fourfold or greater change in antibody titer to *Ehrlichia* spp. antigen by immunofluorescence antibody (IFA) test in acute and convalescent specimens ideally taken four weeks or more apart. HME diagnosis requires the use of *E. chaffeensis* antigen and HGE currently requires *E. equi* or HGE-antigen; **OR**
- Positive polymerase chain reaction (PCR) assay. Distinct primers are used for the diagnosis of HGE and HME; **OR**
- Intracytoplasmic morulae (inclusions) identified in blood, bone marrow, or CSF leukocytes **and** an IFA antibody titer  $\geq 1:64$ .

## In Kentucky

### 2000

Three cases were reported from 3 different districts (Pennyrite, Green River and Lincoln Trail Districts), 2 cases were in males and 1 case in a female, all over 45 years of age.

The Lone Star tick (*Amblyomma americanum*) and the American Dog tick (*Dermacentor variabilis*) both found in Kentucky, are the vectors for HME, the type of Ehrlichiosis usually diagnosed in the southeastern states.

Incomplete testing is the primary reason cases cannot be confirmed. A convalescent sample, frequently not submitted for testing, is necessary for confirmation.